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TITLE: Gas diffusion electrode for PEM fuel-cell - uses carbon fibre fleeces impregnated with rust and PTFE plus catalytically active layer of ion-conducting polymer on noble metal

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PATENT-FAMILY:

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MAIN-IPC			
ES 2175157 T3	November 16, 2002	N/A	000 H01M
008/10			
DE 19544323 A1	June 5, 1997	N/A	006 H01M 004/94
WO 9720358 A1	June 5, 1997	G	035 H01M 008/10
WO 9720359 A1	June 5, 1997	G	026 H01M 008/10
AU 9710949 A	June 19, 1997	N/A	000 H01M 008/10
EP 864183 A1	September 16, 1998	G	000 H01M
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EP 867048 A1	September 30, 1998	G	000 H01M

008/10				
BR 9611769 A	February 23, 1999	N/A	000	H01M
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BR 9611783 A	February 23, 1999	N/A	000	H01M
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CN 1202984 A	December 23, 1998	N/A	000	H01M
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CN 1206504 A	January 27, 1999	N/A	000	H01M
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US 5998057 A	December 7, 1999	N/A	000	H01M
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AU 712037 B	October 28, 1999	N/A	000	H01M 008/10
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KR 99071833 A	September 27, 1999	N/A	000	H01M
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JP 2000513480 W	October 10, 2000	N/A	029	H01M
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EP 864183 B1	November 8, 2000	G	000	H01M
008/10				
DE 59606133 G	December 14, 2000	N/A	000	H01M
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US 6183898 B1	February 6, 2001	N/A	000	H01M
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ES 2153606 T3	March 1, 2001	N/A	000	H01M 008/10
EP 867048 B1	February 20, 2002	G	000	H01M 008/10
DE 59608774 G	March 28, 2002	N/A	000	H01M
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DESIGNATED-STATES: BR CA CN JP KR MX PL RU SG US AT BE CH DE DK  
 ES FI FR GB GR  
 IE IT LU MC NL PT SE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ  
 DE DK EE ES  
 FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK  
 MN MW MX NO  
 NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN AT BE CH  
 DE DK EA ES  
 FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG AT BE CH DE  
 DK ES FI FR  
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BE CH  
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 LU NL  
 PT SE

CITED-DOCUMENTS: EP 176831; EP 298690 ; EP 560295 ; EP 577291 ; EP  
 606051 ; EP  
 687023 ; FR 2258007 ; US 4804592 ; US 5171644 ; US 5399184 ; US 5521020  
 ; 2.Jnl.Ref ; FR 1542346 ; GB 2000363 ; JP 6223835

APPLICATION-DATA:

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ES 2175157T3	N/A	1996EP-0941024	November 26, 1996
ES 2175157T3	Based on	EP 867048	N/A
DE 19544323A1	N/A	1995DE-1044323	November 28,
1995			
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AU 9710949A	Based on	WO 9720359	N/A
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1996			
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EP 867048A1	Based on	WO 9720358	N/A
BR 9611769A	N/A	1996BR-0011769	November 26, 1996
BR 9611769A	N/A	1996WO-EP05206	November 26,
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BR 9611769A	Based on	WO 9720358	N/A
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BR 9611783A	N/A	1996WO-EP05276	November 28,
1996			

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CN 1206504A	N/A	1996CN-0199423	November 28, 1996
US 5998057A 1996	N/A	1996WO-EP05276	November 28,
US 5998057A	N/A	1998US-0077408	October 5, 1998
US 5998057A	Based on	WO 9720359	N/A
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AU 712037B	Previous Publ.	AU 9710949	N/A
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KR 99071833A	Based on	WO 9720358	N/A
JP2000513480W 1996	N/A	1996WO-EP05206	November 26,
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JP2000513480W	Based on	WO 9720358	N/A
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EP 864183B1	Based on	WO 9720359	N/A
DE 59606133G 1996	N/A	1996DE-0506133	November 28,
DE 59606133G 1996	N/A	1996EP-0941615	November 28,
DE 59606133G 1996	N/A	1996WO-EP05276	November 28,
DE 59606133G	Based on	EP 864183	N/A
DE 59606133G	Based on	WO 9720359	N/A
US 6183898B1	Cont of	1999US-0077276	February 10, 1999
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ES 2153606T3	Based on	EP 864183	N/A
EP 867048B1	N/A	1996EP-0941024	November 26, 1996
EP 867048B1	N/A	1996WO-EP05206	November 26, 1996
EP 867048B1	Based on	WO 9720358	N/A
DE 59608774G	N/A	1996DE-0508774	November 26, 1996
DE 59608774G	N/A	1996EP-0941024	November 26, 1996
DE 59608774G	N/A	1996WO-EP05206	November 26, 1996
DE 59608774G	Based on	EP 867048	N/A
DE 59608774G	Based on	WO 9720358	N/A

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ABSTRACTED-PUB-NO: DE 19544323A

#### BASIC-ABSTRACT:

A gas diffusion electrode for a polymer electrolyte membrane (PEM) fuel cell or the hydrogen side of a polymer electrolyte membrane electrolysis cells is electrically conducting, hydrophobic and gas-permeable. It contains at least one carbon fibre fleece (3) which is impregnated with rust and PTFE. The fleece is made from carbonised fibres and has a density of up to 60 grams per sq.metre. There are no more than four fleeces.

There is a catalytically active layer (4) made of electrically conducting material which also conducts ions. It comprises a noble metal catalyst on a carbon carrier and at least one polymer that conducts ions.

ADVANTAGE - Inexpensive to manufacture and allows oxygen to diffuse even when marginal excess pressure exists.

ABSTRACTED-PUB-NO: EP 864183B

#### EQUIVALENT-ABSTRACTS: